



TENDER FOR THE CHELTENHAM ROAD
AFFORDABLE HOUSING SCHEME

TENDER – DOCUMENT TWO

SPECIFICATION

November 2019

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1.0 Preamble

In progressing its agenda to provide more affordable homes for rent within the borough, Corby Borough Council (CBC) has secured a “greenfield” site on the periphery of the town, with subsequent Full Planning Permission (18/00365/REG3 dated 9th April 2019 & Amended 28th May 2019) for a mix of 18 new dwellings.

The site came with both physical and ecological constraints, including; traversing main sewers, close proximity to the railway and the presence of Great Crested Newts and other amphibians / reptiles. As such, this project has experienced some delays. Nevertheless, the scheme has been designed around these physical constraints and CBC obtained a License from Natural England to clear the site, which was successfully completed in September 2019.

The Council would like to use this development as an opportunity to “pilot” ultra-low energy homes to help tackle environmental concerns and fuel poverty within the Borough.

Therefore, the Council now wishes to appoint a competent design & build contractor (ideally with experience of delivering ultra-low energy homes) to complete the detailed technical design and build these dwellings, including all associated works. To this end, it has prepared this single-stage fixed lump sum tender.

In order to evaluate the cost benefit of these ultra-low energy homes, all Bidders are required to submit both a Primary Tender (Option 1) for the provision of ultra-low energy homes and a Secondary “alternative” Tender (Option 2) for homes that simply meet the minimum requirements of the current Building Regulations.

It will be for Bidders to determine how they reduce energy consumption within their scheme (presumably using a combination of improvements to the building fabric and technology) and the extent of that reduction, while optimising the balance between energy savings and the resulting increases to installation costs.

2.0 Scope of Works

The Scheme had a sufficiently developed design to achieve Full Planning Permission. Therefore, the successful Contractor will be required to –

1. Complete the Detailed Technical Design
2. Discharge Outstanding Planning Conditions as appropriate, with particular regard to Pre-Commencement Conditions
3. Submit and secure Full Plans Building Regulation Approval, with the subsequent discharge of any resulting Conditions
4. Construct the whole of the Works and deliver as a “turn key” package for beneficial occupation by the Employer, as defined within or reasonably inferred from the following Tender Documents, which form the Employer’s Requirements –
 - Preliminaries & General Conditions
 - This Specification
 - Tender Drawings & Supporting Documents

The scheme shall comprise of the following accommodation –

- 2no. 1B2P GF Flats
- 2no. 1B2P FF Flats
- 8no. 2B4P Houses
- 2no. 3B5P Houses
- 4no. 2B4P Bungalows

The Scheme shall also include all associated Works, including;

- Plot Works;
 - Parking bays, paths, landscaped gardens, gates, fences, patios, bin stores, bike store, ecological features and the like
- Communal Areas;
 - Access roads & footpaths (including street furniture & vehicle gates), visitor parking bays, street lighting, fencing, landscaping to open spaces, ecological features, etc.
- Provision of New Services, including;
 - All permissions, agreements, fees, charges, works, costs & bonds required to service these dwellings (and where applicable communal areas) with mains; water, electric, gas, telecommunications, digital television and the discharge of storm water & foul sewerage into adopted sewers, including the construction of new sewers to an adoptable standard as required
 - A Provisional Sum has been included to cover Fees / Charges levied by Statutory Undertakers, which shall be paid directly by the Employer
 - **Bidders should include their costs, overheads & profit for gathering Quotations and managing / coordinating these works, within their Tendered Sum**
- Provision of Highway, including;
 - All permissions, agreements, fees, charges, works, costs & bonds required to appropriately connect the development with the existing adopted highway and adoption of the new estate road, which shall be constructed to an adoptable standard
 - A Provisional Sum has been included to cover Highway Authority and associated Surety and Legal Fees, which shall be paid directly by the Employer
 - **Bidders should include their costs, overheads & profit for managing / coordinating work with the Highway Authority, within their Tendered Sum**
- Diversion, disconnection and / or protection of existing services
 - Where unexpected costs are incurred in the diversion or disconnection of existing services, the Provisional Sum for Statutory Undertakers shall be used and paid directly by the Employer
- The design, erection, use and dismantling of all temporary works
- Any required servicing to “technologies” for 12 months from Completion
- Maintenance of communal landscaping for 12 months from Completion
- The Rectification of Patent Defects for 12 months from Completion and Latent Defects for 12 years under Deed

3.0 Design & Workmanship Requirements

An Architect (RG+P) and Consulting Engineer (Farrow Walsh) have developed the design using the National Space Standards, with sufficient detail to obtain Full Planning Permission (see Decision Notices, Drawings & Supporting Documents).

The Contractor shall develop this design by way of their detailed technical design, conforming to the following requirements –

3.1 Known Amendments

The following known amendments shall be made to the approved design -

- Ground Floor Flats & Bungalows
 - Baths are to be replaced with double length, low profile, slimline accessible shower cubicles
- Plot 17 (Bungalow)
 - Supply & fit a sun-pipe to the internal windowless shower-room, which will invariably require a minor material amendment to the Planning permission

3.2 Planning Permission (as amended)

The development shall conform fully with the Approved Planning Permissions and where appropriate, the Contractor shall discharge Conditions in a timely manner and obtain written confirmation of their Discharge from the Local Planning Authority (see 3.2.1 Planning Conditions).

The Contractor shall not commence Works onsite until all the Pre-Commencement Conditions have been discharged.

The Employer may accept Non / Minor Material Amendments to the Planning Permission (see 3.1 Known Amendments), in order to facilitate the Contractor's detailed technical design. However, designs requiring a new Full Planning Application shall be prohibited in order to prevent further delays to the scheme.

3.2.1 Planning Conditions

Condition 1: Years - No Further Action (NFA)

Condition 2: Approved Drawings – NFA

Condition 3: Construction Management Plan – **Contractor to action pre-commencement**

Condition 4: Contamination – As the Ground Investigation was not submitted as part of the original Planning Application, it will be submitted pre-contract to discharge this Condition

Condition 5: Piling – Not envisaged

Condition 6: Crane Lifting Management Plan – **Contractor to action prior to any lifting**

Condition 7: Sustainable Drainage Strategy – **Contractor to finalise pre-groundworks**

Condition 8: SUDS Completion & Maintenance – **Contractor to action pre-occupation**

Condition 9: Sample & Materials – **Contractor to finalise prior to building works above ground**

Condition 10: Surfacing Materials – **Contractor to finalise prior to completing the external building works**

Condition 11: Landscape & Ecological Management Plans – Discharged 03.07.2019 (see Letter)

Condition 12: Protected Species - This will be discharged pre-contract

Condition 13: Tree Protection Plan – **Contractor to action pre-commencement**

Condition 14: Soft Landscaping - **Contractor to finalise prior to completing the external building works**

Condition 15: Refuse / Recycle Storage - **Contractor to action pre-occupation**

Condition 16: Boundary Treatment - **Contractor to finalise pre-commencement**

Condition 17: Crime Prevention Strategy - **Contractor to action pre-commencement**

Condition 18: External Lighting - **Contractor to action prior to completing the external building works**

Condition 19: Fire Hydrants – The Employer shall pay this commuted sum, discharging the Condition prior to occupation

Condition 20: Education - The Employer shall pay this commuted sum, discharging the Condition prior to occupation

Condition 21: Affordable Housing - The Employer shall discharge this Condition prior to occupation

Condition 22: Environmental Health - **Contractor to action prior to erecting any buildings**

Condition 23: Legal Agreement – NFA unless land is sold to a private developer

Note that reference to the date of 15.01.19 is an error

Condition 24: Permitted Developments Rights - NFA

3.3 Building Regulations

The design for both Options 1 & 2 shall conform fully with the current Building Regulations.

The Contractor shall submit a Full Plans Building Regulation Application to CBC's Building Control Department for approval, amending their design as required to ensure any Conditions are appropriately discharged, with written confirmation.

Please see below specific requirements -

3.3.1 Fabric

In order for Building Control to ensure the fabric of the building complies with the Regulations, the Contractor shall provide the Target Fabric Energy Efficiency (TFEE) calculations for the various building elements and the average U-Value, for each archetype.

This will ensure the dwellings remain relatively efficient, even if certain energy saving technologies are removed at the end of their service life.

3.3.2 Accessibility

The development shall conform to Part M Category 2 – Accessible & Adaptable.

Minimum finished floor to ceiling height to both ground and first floors shall be 2.3m, with no internal steps other than stairs to an upper floor.

All dwellings & parking bays shall have level access, with push-chair / wheelchair “parking” by external doors.

3.3.3 Air Tests

All 18 dwellings are to be tested upon completion to ensure they each meet the Building Regulations and any superior airtightness required by the Contractor’s Detailed Technical Design.

3.3.4 Sound

As a minimum, all dwellings shall conform to Part E of the Building Regulations.

The Contractor shall also ensure acceptable noise levels in accordance with BS8233:2014 (Guidance on Sound Insulation & Noise Reduction for Buildings) by the implementation of suitable noise mitigation measures, as recommended by the Noise Assessment Report.

Such work should be closely supervised to ensure the correct materials are used and detailed, especially on party walls and floors.

Each archetype and all four flats are to be tested upon completion to ensure they conform with the above requirements.

The Contractor shall also use the services of CBC’s Building Control Department to undertake site inspections during construction to ensure compliance with the Approved Drawings, with a Completion Certificate obtained for each dwelling.

The Employer shall pay all Building Control Fees directly by internal transfer.

3.4 Building Warranty

The Contractor shall procure the registration of the dwellings under a 12 year LABC Social Housing Warranty (including Developer Insolvency Cover), with a Completion Certificate obtained for each dwelling.

3.5 Materials, Components, Techniques & Systems - General

All materials, components, techniques & systems shall satisfy the Building & Warranty Inspectors and comply with the latest relevant British / European Standards, Codes of Practice / Guidance and where applicable, have a British Board of Agrément (BBA) Certificate.

All materials and components incorporated into the Works shall be handled, stored and fixed strictly in accordance with the manufacturer’s recommendations.

Where components have been specified by name within this Specification, it is the intention of the Employer to standardise such components across their housing stock. **It is therefore crucial for the Contractor to gain prior approval from the Employer for the use of any alternatives.**

3.6 Alternative Construction Methods, Techniques, Materials, Components & Technologies

Any proposed alternative construction method shall meet the minimum requirements of the Building Regulations.

The Employer shall not accept any prototypes and as such, the Contractor is required to demonstrate that any proposed construction methods, techniques, materials, components and/or technologies have been successfully used on a similar scheme and in comparable circumstances.

Where possible, such construction methods, techniques, materials, components and/or technologies, should ideally have some form of legitimate accreditation.

Where applicable, the Contractor shall ensure their design of any renewable energy technologies would not preclude an application to the Domestic Renewable Heat Incentive Scheme, with all equipment registered on the current Domestic Renewable Heat Incentive Product Eligibility List and installation / certification under the Microgeneration Certification Scheme (MCS) by an approved MCS Contractor.

3.7 Ecology

To a greater extent, off-site ecology works have been / will be undertaken by others, with the exception of "connectivity measures" on Aintree Road (see 3.7.1 below).

Onsite, the Contractor shall ensure their design & work encompasses the ecological measures contained within the tender documents and in particular –

3.7.1 Great Crested Newts(GCNs), Other Amphibians and Reptiles

A copy of the GCN License must be kept in the site office at all times.

Site management is required to check the GCN fencing daily and repair as necessary. All checks & repairs are to be logged within the Site Ecology File.

All staff and site visitors are to be made aware of the presence of GCNs and the procedures to following, as part of their site induction.

Connectivity measures (dropped) kerbs are required both onsite **and on Aintree Road** (see Fig.3.3 Connectivity Measures). **In regard to the latter, the Contractor shall insure these are included within any subsequent Highway Authority Agreement.**

The Contractor shall be responsible for the removal of the GCN fencing upon Completion, under ecological supervision, between the months of March and October.

3.7.2 Bats & Hedgehogs

Bat boxes and hedgehog "gaps" are to be provided as per the Landscape & Ecological Management Plan (Fig.1).

3.7.3 Lighting

During construction, there shall be no external lighting along the railway embankment.

All new street lighting shall meet the current environmental standards of good practice in order to reduce potential light pollution and will use the lowest intensity possible for its purpose.

3.7.4 Habitat & Tree Protection

The Contractor shall ensure Planning Condition 13 (Tree Protection) is discharged prior to commencement.

Vegetation along the boundary fence lines shall be retained.

Retained off-site trees close to the boundary are to be adequately protected from site operations. This includes both physical damage and from soil compaction, by maintaining fenced Root Protection Areas (RPAs) determined in accordance with BS 5837:2012 or following arboricultural advice.

No vehicular access will be permitted within the RPAs, unless suitable soil protection layers are used, and no storage of materials, installations of services, excessive cultivation for landscape installations or fires will be permitted.

3.7.5 New Native Hedgerow

The Contractor shall establish a new native hedgerow, as per the Tender Drawings, which shall be composed as per Table 3 below.

Table 3. Native Hedgerow Species Mix

| Species | Latin | Composition |
|-------------|---------------------------|-------------|
| Hawthorn | <i>Crateagus monogyna</i> | 30% |
| Blackthorn | <i>Prunus spinosa</i> | 30% |
| Alder | <i>Alnus glutinosa</i> | 15% |
| Field maple | <i>Acer campestre</i> | 15% |
| Crab apple | <i>Mauls sylvestris</i> | 5% |
| Dog rose | <i>Rosa canina</i> | 5% |

Other species which are approved by Network Rail¹ for planting adjacent to the railway which can be incorporated include: silver birch *Betula pendula*, bird cherry *Prunus Padus*, wild pear *Pyrus Communis*, Fir Trees – Pines *Pinus* species, mountain ash – Whitebeams *Sorbus* species, false acacia *Robinia* species), willow shrubs (shrubby *salix*), *Thuja Plicatat* “Zebrina”.

3.7.6 Onsite Communal Grassland

3.7.6.1 Tussock Grassland

Those onsite areas identified on the Ecologist's Drawing Fig.3.1 (Habitat Creation, Restoration & Enhancement) for Tussock grassland shall be seeded with Emorsgate Em10.

3.7.6.2 Amenity Grassland

The remaining areas of amenity grass shall be seeded with a flowering lawn mix (Emorsgate EL1 or similar)

3.8 Network Rail

The Contractor's shall pay due regard to the requirements and guidance set out in Network Rail's Consultation Response.

3.9 Security

The Contractor shall ensure their design discharges Planning Condition 17 (Crime Prevention Strategy), prior to commencement.

Dwellings shall be designed and certified to Secure by Design (SBD) Homes 2019 Version 2 (March 2019) Silver Award, while the development as a whole should strive to obtain a Gold Award, where the existing layout permits.

3.10 Dwellings

3.10.1 Kitchens

Where feasible, fitted kitchen designs shall fulfil the following minimum requirements -

- Sink Top & Drainer – See 17.0 Kitchens
- Cooker Space – 600x600mm
- Washing Machine Space – 600x630mm
- Other Base Units – equivalent to 600x1600mm
 - Flats - 600x1200mm
- Ancillary Equipment Space – 600x600mm (i.e. Dishwasher)
- Fridge / Freezer Space with Removable Worktop – 600x600mm
- Broom / Larder Cupboard – 600x600x1950mm
- Tray Space – 600x150mm
- Recycle Bin Space – 600mm
 - Flats – 300mm
- Total Length of above Fitments –
 - Flats – 4930mm
 - 4Person - 5630mm
 - 3Bed – 6230mm
- Minimum Storage Capacity –
 - Flats – 1.5m³
 - 4Person – 2.1m³
 - 3Bed – 2.2m³
- Wall Units to be 300mm deep & 450mm above Base Units
- Kitchen Workspace Zone – 1500x1000mm
- Kitchen layout “triangle” of fridge / cooker / sink
- Kitchen worktop not interrupted by circulation
- Minimum 1200mm between cooker space and sink, with 500mm clear worktop either side of cooker space and no electrical outlets within 150mm of cooker space
- Facing kitchen units a minimum of 1200mm apart
- Secure storage for harmful substances

3.10.2 Electrical Installation

- Minimum Number of Double Sockets
 - Living Room – 3 (plus TV position – 2)
 - Dining Space – 2
 - Kitchen – 4
 - Single Bedroom – 2 / *Double or Twin Bedroom - 3
 - Hall – 1 / Landing - 1
 - Store – 1
 - *Study Area / Home Office – 2
- Heights
 - Low level sockets – 450mm
 - Kitchen sockets / switched fuse spurs – 150mm above worktop
 - Light switches – 1200mm
- Kitchen appliance spaces shall have either a “gang” switch or individual switched fuse spurs operating low level un-switched socket outlets, with switch to fridge / freezer space off-set to one side
- Digital TV aerial connections to Living Room & Master Bedroom
- Phone / Data points to Hall, Living Room, Master Bedroom & Study Area
- Single USB socket required in Living Room, Kitchen & Master Bedroom
- Two-way light switching in Hall, Stairwell and any room with two points of entry
- Switched light in Store and Roof Space (with neon)
- Fused spur for future security alarm
- Fused spur for future focal point fire
- Fused spur for stair-lift (houses only)
- All switches shall be etch labelled and include neon, where the light is not directly visible (i.e. external, store & loft) to prevent unwanted operation

3.11 Employer Approval / Change Control

The Contractor shall invite the Employer (or its Representative) to all formal Design Team Meetings.

The Contractor shall ensure the Employer (or its Representative) is issued with all drawings and specifications for the proposed design in a reasonable time for consideration and approval, prior to the undertaking of the Works to which they relate.

The Contractor shall make the Employer (or its Representative) aware of any enforced changes to the design or any design choices that present themselves.

Notwithstanding any such authorised change, the Contractor shall comply fully with the approved design and rectify any deviation at their own cost.

3.12 Metering

The Contractor shall arrange metering with the Employer's "preferred" provider; Robin Hood Energy.

3.13 Collateral Warranties

The Contractor shall procure within 28 days of appointment, JCT Collateral Warranties to the benefit of the Employer from their consultants and those sub-contractors with a significant design element.

3.14 Product Warranties & Design by Others

The Contractor shall provide Product Warranties from manufacturers and/or suppliers of materials / components, which have an element of design.

As the Principal Designer, the Contractor shall examine any such design by others and certify it for inclusion within the Works.

4.0 Project Management

4.1 Construction Management Plan

As per Planning Condition 3, the Contractor shall prepare and submit a Construction Management Plan to the Local Planning Authority for approval, prior to commencement.

4.2 Monthly Progress Meetings

The Contractor shall be required to meet with the Employer every month to report on the following

–

- Design
 - Outstanding Design Items / Issues
 - Schedule of Required Information
 - Statutory Approvals
- Programme
 - Update on progress and confirmation of anticipated Completion
 - Identification of any delay / slippage and details of mitigating action
 - Impact of any Variations
- Cost
 - Expenditure against Contract Sum Analysis and Cash-flow Forecast
 - Value of any Variations
 - Anticipated Final Account
 - Valuation
- Risk
 - Update Risk Register
- Progress with Statutory Undertakers & Authorities
- Health and Safety / CDM

4.3 Completion & Handover

Prior to Completion, the Contractor shall give the Employer four weeks' notice in order to advertise properties and arrange viewings / lettings.

Completed dwellings shall remain within the curtilage of the Contractor's site security until occupation following any partial possession of the site. The Contractor shall re-arrange their site layout once occupation has occurred.

At Completion (or Partial Possession by agreement) the Contractor shall (with assistance from the Employer) provide a plot specific Home User Guide for each dwelling, comprising –

- Introduction
- Allocated Parking
- Locating Important Equipment
 - Consumer Unit
 - Main Isolation Valves
 - Meters
 - etc.
- Utilities
 - Initial Provider (including Emergency & Customer Service Contacts)
 - MPAN
 - MPRN (if applicable)
 - Meter Numbers
 - Meter Readings
- Reporting Defects
 - Definition
 - Procedure within Rectification Period
 - Procedure after Rectification Period
- Finishes, Fixtures & Fittings
- Instructions for Mechanical & Electrical Equipment
- Environmental Design Features & Energy Saving Tips
- Access & Security
- Fire Safety
- Advice on Use, Care and Maintenance
- User Guides & Manuals
- Refuse & Recycling Arrangements
- Local Amenities, Information & Transport

At Completion the Contractor shall also provide the Employer with one draft disc of the Site Manual (incorporating the Health & Safety File), with the final hard copy and four final discs provided once all certification is finalised.

The Site Manual shall comprise of the following documentation:

- Health and Safety File
 - A brief description of the Works
 - Any residual hazards
 - Key structural principles
 - Hazardous materials
 - Mechanical & Electrical Installations
 - Health & safety information relating to any cleaning / maintenance equipment
 - Details of significant services
 - A full set of As-Built Drawings
- A schedule of consultants & subcontractors and details of their work
- A schedule of building materials, components and fittings installed and their supplier
- Operation and Maintenance Manuals

- Copy of Planning Permission, including correspondence from the LPA confirming the discharge of all appropriate Planning Conditions
- Original Building Regulation Completion Certificates
- Energy Performance Certificates (EPCs) and detailed SAP calculations for each dwelling
- Original LABC Warranties
- Original Electrical Test Certificates for all connections and installations
- Original Gas Safety Inspection Certificates in compliance with the Gas Safety Installation and Use Regulations 1998 (where applicable)
- Other Certificates, e.g.
 - Secure by Design
 - MCS
 - Air Tests
 - Sound Tests
 - TV Reception Test Certificate
 - Waste Management
 - etc.
- Guarantee from the Door & Window Installer
- Other Guarantees / Product Warranties on materials, components, techniques & systems
- Copies of relevant Agreements with Statutory Authorities, e.g. Section 38, 278, 104 & 106 Agreements, etc.
- Details and drawing(s) clarifying the extent and/or details of any areas or assets adopted by Statutory Undertakers or Statutory Authorities
- A drawing clarifying boundary details and ownership, rights of way or access, and any existing or new easements, and any trees which are the subject of tree preservation orders
- Procedure to be followed by the Employer in the event of a Defect or Latent Defect requiring remedial action
- Other Documentation
 - Electricity, gas and water meter readings (where applicable)
 - Utility Provider
 - Meter reference/serial numbers
 - Electricity MPAN and Gas MPRN reference numbers (where applicable)

4.4 Clerk of Works (CofW)

The Employer shall employ a part-time Clerk of Works to monitor the quality of the Works, liaise with Site Management and attend the Monthly Progress Meetings.

The Contractor is requested to assist the CofW in their duties, by allowing access to the site following a site induction and use of its site facilities.

The CofW shall immediately notify the Contractor of any defect requiring rectification.

4.5 Inspections (Snagging/Back-Snagging)

Once the Contractor is satisfied as to the completion of a dwelling or communal area and believes it to be free of defects and ready for handover. He shall advise the CofW, who will undertake a thorough inspection of the dwelling / communal area and prepare a Schedule of Defects for issue to the Contractor, where such defects exist.

The Contractor shall then complete the Schedule of Defects within 14 days**, before notifying the CofW that the dwelling / communal area is ready for re-inspection.

This process shall continue until the Schedule is completed to the satisfaction of the CofW.

4.6 Defects Rectification Period

The Contractor shall submit a Defect Rectification Procedure for approval by the Employer (or its Representative).

4.6.1 Response Times**

The required response times, depending upon classification, are as follows:

- Emergency (defined as a danger to life/limb or severe damage to property) – Make safe ASAP within 4 Hours
- Very Urgent (repair a previous emergency) – 24 Hours
- Urgent (gross inconvenience) – 3 Working Days
- Routine – 10 Working Days

4.7 End of the Defect Period

At the End of the Defects Rectification Period, the Employer's CofW shall re-inspect the Works and prepare a Final Schedule of Defects for issue to the Contractor.

The Contractor shall then complete the Final Schedule of Defects within 28 days**, before notifying the CofW that the Works are ready for re-inspection.

This process shall continue until the Final Schedule is completed to the satisfaction of the CofW.

***Where the Contractor fails to meet the timescales detailed above. The Employer reserves the right to give notice of their intent to carryout the remedial works and to deduct the cost of such work from the Contract Sum.*

Building Specification

5.0 Drainage

Pipes, chambers and fittings shall be either uPVC, vitrified clay or concrete by Hepworth or similar approved and laid to an adoptable standard in accordance with an Engineer's design.

Sewers for public adoption should be a minimum of 3m from structures.

Components shall be compatible, with proprietary adaptors used where necessary to connect different sections of the system.

All areas of the system shall be accessible for repair & maintenance, by way of either; internal access panels, rodding-eyes, gullies or inspection chambers.

All covers shall remain visible and flush with their permanent surroundings (slightly below in grass areas to allow for mowing). They shall all be galvanised steel or painted iron and of a strength appropriate for their location and/or depth, with all frames fully bedded in concrete, irrespective of the manufacturer's minimum requirements.

Where possible, covers should be outside the lines of pedestrian / vehicular traffic and square to buildings, fences, kerb lines, etc..

Prior to handover and in addition to any statutory tests, all chambers shall be cleared of rubble before flushing the entire system.

Storm water attenuation shall preferably be subterranean by way of enlarged pipes and/or a modular storm-cell system and include a practicable maintenance regime.

6.0 Substructure

The Contractor shall ensure foundation depths and design conform to the recommendations of the Ground Investigation Report, the resulting Engineer's Design and to the approval of the Building / Warranty Inspectors.

The Employer shall accept traditional insulated concrete slab floors or beam & block, so long they conform to the Building Regulations and are correctly detailed and constructed.

Other alternative methods of construction will be considered on a system by system basis and proposals for such should be included within the Tender Submission (see 3.6 - Alternative Construction Methods, Techniques, Materials, Components & Technologies)

7.0 Superstructure

The Employer shall accept traditional filled cavity masonry or timber frame, so long they conform to the Building Regulations and are correctly detailed and constructed to best practice.

Other alternative methods of construction, such as off-site panelised modular construction will be considered on a system by system basis and proposals for such should be included within the Tender Submission.

In any event, all external wall construction / finishes shall conform to Building Regulations, require low maintenance and have a minimum 100 year life expectancy.

8.0 Roofs

All roofs shall be pitched, free of high maintenance features, have projecting eaves / verges, exposed gutters and be constructed / finished to give a minimum 60 year life expectancy.

The roofs shall have a breathable membrane and mechanically fixed "dry" ridge & verge systems, with lead flashings / soakers and all shall conform to best practice.

Other alternative methods of construction will be considered on a system by system basis and proposals for such should be included within the Tender Submission.

Any timbers shall be pressure impregnated and protected with a preservative treatment in accordance with guidance provided by the Wood Protection Association. All fixings, straps, etc shall be non-corrodible and compatible with the timber preservative treatment. Cut details shall receiving two coats of brushed preservative.

Trusses to be braced in accordance with the manufacturer's design drawings and carry a Product Warranty.

All roofs shall be insulated and ventilated in compliance with best practice and meet the minimum requirements of the Building Regulations or any superior requirement imposed by the Contractor's design.

The loft hatch shall be an insulated, draught-proofed, lockable proprietary unit, with a fire resistance equivalent to the surrounding ceiling.

An area of roof space 1000mm wide immediately surrounding the loft hatch shall be boarded out in 18mm ply to aid access. There shall also be a single batten-holder light fitting mounted at high level above the loft hatch, operated by a etch labelled single switch with neon, mounted on the wall below.

9.0 External Finishes

While indicative external materials of red brick and grey concrete roof tiles were submitted with the successful Planning Application, there still remains the need to finalise the materials palette and discharge Condition 9 – Sample & Materials (see 3.2.1 Planning Conditions).

The Employer may consider minor 1st floor features, such as a feature box window, brickwork detailing, through coloured render panel or a BBA certified pre-finished maintenance free weather board, such as Marley Eternit Cedral and/or a slightly different roof covering.

Where deemed necessary, the Contractor shall construct a sample panel onsite of the external finishes, including all features, for the duration of the superstructure's construction.

10.0 Doors & Windows - General

All external doors and windows shall be high performance, with an A or A+ Green Guide Rating, comply with SBD PAS24 and have a minimum 10 year warranty.

External doors and windows shall be set back from the face of the external wall to provide an adequate reveal, with external doors having a 15mm low-level threshold and where necessary, adequate channel drainage to prevent water ingress.

Safety glass shall be used in all locations below 800mm.

11.0 Windows

Windows shall conform to the Approved Drawings, with trickle vents if appropriate (see 19.0 Ventilation), lockable fasteners and restrictors to all first floor windows, apart from escape windows, where ironmongery shall conform to the current Building Regulations.

Windows above ground floor shall be capable to being cleaned and maintained from the inside.

Windows shall be fitted with at least one opening light per room with security ironmongery to enable it to be left open as a secure night vent.

Windows above sinks / basins shall have the operating handle at the bottom to aid accessibility.

All window openings to have an MDF window board (with the exception of tiled cills in kitchen / bathroom / showroom / WC and a 19x44mm painted softwood curtain batten (to also include external door openings into habitable rooms)).

12.0 External Doors

External doors shall be pre-coloured uPVC, GRP or metal faced composite door sets (colour TBA), complete with frame and multiple point locking, with solid spindle handles and key to key euro cylinder (3 sets of keys per lock).

Front doors to all dwellings shall be fitted with a security chain, central telescopic spy hole at 1400mm above internal floor level, numerals and a letter plate to BS EN 13724:2013.

All doors shall be approached via a level access, with a GRP porch canopy above front doors.

13.0 Internal Doors

Internal door linings shall be formed from softwood or MDF, with widths to suit specific location requirements.

Doors shall be robust unglazed stave core contemporary panel doors, subject to approval by the Employer and uniformly matched across the development, with solid spindle mortice latch set and 3no. steel butt hinges.

14.0 Ironmongery

The Contractor shall provide a contemporary ironmongery schedule, with samples for approval by the Employer.

Bathrooms / Shower Rooms and WCs shall have privacy furniture with a locking handle mechanism and external emergency release, rather than a mortice lock or bolt.

Built-in cupboards shall not be lockable, other than a single kitchen wall unit for hazardous substances.

Door stops to protect internal walls are to be fitted. as required.

Coat hooks (one per bed space) are to be fitted in the hall.

15.0 Internal Walls / Ceilings

It is assumed that internal partitions shall be constructed from either lightweight concrete blocks or timber / steel studwork and faced in plasterboard, although alternative methods will be considered.

Proprietary drylinings shall be fixed by using either battens, bonding adhesive or the "dot & dab" method, with a sealed perimeter

All plasterboard shall have taped / filled joints and either Drywall Sealer (two coats in "wet" areas) or a skimmed finish.

Plasterboard in "wet areas" (kitchens, bathrooms, shower rooms & WCs) shall be moisture resistant with vapour check, while ceilings below the roof space shall also be vapour checked.

Stud walls in Bathrooms, Shower Rooms and WCs shall be lined to their full height with 18mm marine plywood for the securing of future fittings and adaptations.

Skirting and architrave shall be pencil round to the following finished sizes in MDF –

- Skirting boards: 14.5 x 94mm (finished sizes)
- Architrave: 14.5 x 44mm (finished sizes)

16.0 Stairs / Open Landings

Stairs shall suit specific location requirements, shall not be spiral, devoid of top winders and shall be wide enough to accommodate a future stair-lift.

Handrails / balustrades shall be provided at a minimum of 900mm above floor level, with spindles spaced to prevent a 100mm sphere to pass.

17.0 Kitchens

Manufactured by Premiere Kitchens (or similar approved), as per the following schedule –

- Range / Colour: Senator Eco / White Ash
- Unit Type: Drawer Line
- Carcass: Standard P2 in White
- Plinth: White
- Handle: Chunky D
- Worktop: 38mm x 600mm in Harvard Oak
- Worktop Joints: Aluminium Strips & End Caps
- Wall Unit Height: 720mm
- Sink: 940mm x 485mm Contract Inset Sink with single tap hole
- Tap: Mono Mixer Tap with Single 3" Lever & Swivel Spout
- Décor End Panels & White Filler Panels as required

Final layouts to be approved by the Employer from designs provided by the Contractor.

The cooker space is to be provided with both an electrical connection and a fixed gas elbow connector, with an iron plug.

No white goods are required and mechanical extraction shall be via a cooker hood (see 19.0 Ventilation).

18.0 Bathrooms / Shower Rooms / WC

Sanitary ware and fittings shall be as per the following schedule (or similar approved), where regulations in water use allow –

- Bathroom / Shower Room
 - Lecico Atlas Close Coupled Pan / Cistern / Seat & Cover
 - Lecico Atlas 1-Tap Basin 550
 - Lecico Atlas Pedestal
 - Mono Mixer Tap with Single Lever
 - Plugs & Chains
 - Matching 600mm chrome towel rail & toilet roll holder
 - 450 x 600mm Mirror over basin
 - Bathroom
 - Roca Contesa 1700mm / 130 Litre Steel Bath with Armitage Elmdale Bath Panel
 - Vado Lever Bath Shower Mixer with Shower Riser Kit***
 - Shower Curtain or Panel
 - Shower Room
 - Double Slimline Shower Cubicle
 - Vado Exposed Thermostatic Mixer Shower Package***
- WC
 - Lecico Atlas Close Coupled Pan / Cistern / Seat & Cover
 - Lecico Atlas 1-Tap Basin 450
 - Lecico Atlas Pedestal
 - Mono Mixer Tap with Single Lever
 - Plug & Chain
 - Matching chrome towel ring & toilet roll holder

- 450 x 600mm Mirror over basin

****Alternatively, depending on the Contractor's proposed design, a 10.5kw thermostatically controlled electric shower by Triton or Mira (or similar approved) would be acceptable.*

19.0 Ventilation

Ventilation shall meet the minimum requirements of the Building Regulations.

The Employer assumes that any ultra-low energy design would benefit from a whole house heat recovery system, that will need to include extraction from the cooker hood (see 17.0 Kitchens) and where air changes within the dwelling are strictly regulated.

On designs merely intended to meet the minimum requirements of the Building Regulations, the Employer specifies a Vectaire Elegance EL1003 extractor fan in all "wet areas".

20.0 Electrical Installation

As per the following schedule (or similar approved), installed and commissioned by an NICEIC registered electrician in accordance with the current IEE Regulations –

- Consumer Unit: Hager VM114K 14-Way Non-Split Board populated by Hager RCBOs
- Switches / Sockets / Light Fittings: Hager White Plastic
- Light Fittings:
 - Kitchen – Enclosed low energy light fitting
 - Bathroom / Shower Room – Suitably enclosed light fitting with appropriate IP rating for intended zone
 - WC / Store / Roof Space – Batten holder
 - Remainder – Pendant set (multiple in larger rooms) positioned to avoid doors and set at a height of no less than 2m above floor level
- Non-illuminated shaver socket in bathroom / shower room
- Ventilation: See 19.0 Ventilation
- External Lighting:
 - Contemporary Design
 - Front & Rear Doors – Matching design with photocell & PIR sensing, with manual override inc. neon
 - Parking Bays (only if not illuminated by other means) – matching bulkhead light with manual internal switch with neon
- Hard-wired doorbell adjacent to front door

Lighting shall be secured into timber noggins or ply pattresses. Positions should be readily accessible and include the head and foot of stairs, with a minimum of two lighting circuits.

Cables to be run vertically under protective containment, with the use of surface mounted conduit is prohibited. Sockets should be positioned to avoid the potential for trailing leads across doorways / circulation routes.

Lighting, small power & data layout is to be approved by the Employer prior to installation.

The Contractor shall test the TV signal strength at the development site, before installing a digitally compatible TV aerial and cable within each roof space (communal aerial on the four flats), with operational outlets in the living room and master bedroom.

Where signal strength is deemed insufficient, the following mitigating measures shall be use in ascending order –

- Booster
- External Mounting
- Satellite dish in place of aerial

The appropriate number of smoke (and where necessary carbon monoxide detectors) shall be fixed in each dwelling in suitable locations. Detectors shall be mains operated (with battery backup) via a protected circuit, with a heat detector in the kitchen.

An external cavity recessed meter box shall be provided, as per the Tender Drawings and accessible by path.

21.0 Renewable Technologies

See 3.6 - Alternative Construction Methods, Techniques, Materials, Components & Technologies.

The Employer assumes that any ultra-low energy design would benefit from technologies such as heat pumps and solar panels, with some form of energy storage system.

The Contractor will be required to provide details of the proposed system and evidence of their successful use on similar schemes.

22.0 Plumbing

The main stop-cock is to be labelled as such and where the mains water pressure is too high, a 2 bar pressure reducing valve is to be installed.

All pipework and fittings are to be unobtrusive and designed to meet water regulations and prevent Legionella.

Exposed pipework shall be in copper with capillary fittings, with Hep2O pushfit plastic pipes and fittings or similar approved acceptable in concealed locations. Where practicable pipes can be contained in either proprietary conduit or boxed-in, using cup & screw fixings for ease of access.

Final connections to sanitary ware shall be in braided flexible tails, using compression fittings and accessible ball-o-fix isolator fittings.

All hot water outlets shall have a thermostatically controlled supply.

The hot and cold water to the washing machine and dishwasher spaces shall include the appropriate fittings for connection, with stop-taps colour coded for incoming hot / cold feeds and complete with trapped / capped waste facilities or a sink waste hose spigot.

Overflows shall be readily observable, although positioned so as not to pose a hazard.

An external tap with double check valve shall be provided to all dwellings with a private rear garden, which shall be fully compliant to the latest Water Regulation Bylaws, in a position preferably above a gulley.

All pipe lagging is to fully comply with Bylaw 49 for the protection of water pipes against freezing, including measures to prevent the freezing of overflows and any external boiler condensate connections (if applicable).

All above ground drainage is to be uniform and supplied by Marley or similar approved, with a standard half-round gutter profile, except where increased flows from valleys, steeply pitched roofs or the like require a deeper profile. Use of oversized gutters / downpipes should also be used in areas prone to high leaf fall. Gutters / downpipes shall be installed strictly in accordance with manufacturer's recommendations and tolerances.

Downpipes shall not discharge onto low level roofs and all rainwater downpipes are to be sealed into underground drainage using a proprietary adaptor, coloured to match rainwater goods.

Balloon vents shall be fitted to all external soil pipes and all access covers to above ground drainage shall be accessible.

23.0 Heating

See 21.0 Renewable Technologies.

All space and water heating shall meet the minimum requires of the Building Regulations.

Where traditional gas heating is provided for dwellings that simply meet the Building Regulations. Heating shall be provided by an Ideal Logic Combi 30 natural gas fired combination boiler or similar approved. Installation and commissioning by a Gas Safe Registered installer shall be in accordance with the manufacturer's instructions and site specific plumbing and heating design.

The boiler shall be sited to reduce overall pipe runs, but not in bedrooms or on their adjoining walls and sufficient access shall be provided for servicing. Flues shall not be boxed-in to allow visual inspection.

Exposed pipework shall be in copper with capillary fittings, apart from compression fittings at the boiler, pump and the like. Hep2O pushfit plastic pipes and fittings or similar approved are acceptable in concealed locations.

Radiators shall be Quinn or similar approved and sized to the site specific plumbing and heating design to meet Part L, with Honeywell VT15 thermostatic radiator valves to all radiators apart from a by-pass radiator in rooms with a wall stat.

TRVs shall be bottom mounted in the flats / houses and top mounted in the bungalows to aid accessibility.

Room Stat / Controller shall be a Honeywell CM701 or similar approved.

System is to be flushed and dosed appropriately with inhibitor.

An external semi-buried gas meter box shall be provided, as per the Tender Drawings and accessible by path. Footpath widths adjacent to the box shall be maintained.

Exposed external gas carcassing should be kept to a minimum and the internal isolation valve should be positioned discreetly within the dwelling.

24.0 Store Room / Airing Cupboard

Store rooms shall be lit, heated and provided with a minimum of 0.4m² of slatted shelving and a single power point.

25.0 Internal Finishes

As per the following schedule –

- Floors
 - Any unevenness in floor screeds shall be corrected with a proprietary latex levelling compound
 - Kitchen / Bathroom / Shower Room / WC – Appropriate Cushioned Vinyl Flooring: Make & Colour - TBA
 - Remaining Screed Floors – Concrete Hardener & Dust-proofer
- Walls & Ceilings
 - Mist coat + two coats of vinyl matt emulsion in white
 - "Wet Areas": Shall be mould resistant
- Woodwork
 - Internal Doors (if not pre-finished): Two coats of satinwood in white
 - Remaining Items: Two coats of primer / undercoat + one coat of gloss in white
- Ceramic Wall Tiles
 - Fixed using a proprietary pre-mixed waterproof adhesive
 - To include mechanically fixed plastic trims and tiling beads to corners & angles
 - White 150mm x 150mm Ceramic Tiles

- Three course backsplash above kitchen worktops
- Cooker space to floor
- Two course backsplash behind basins
- Window cills in kitchen, bathroom, shower rooms and WC
- Full height to ceiling around bath & shower area****

****Shower cubicles can either be tray & tiled or pre-finished “pod”.

26.0 Sealants

All gaps between components, products and/or finishes inside & out shall be sealed with a suitable sealant, including between flooring and skirting and all sanitary appliances.

External Works

27.0 Gardens

Gardens shall be no steeper than 1:12, with terracing provided where this is not possible.

All grass areas shall be turfed using fine lawn turf, with low maintenance shrubs beds acceptable to the front / side, although planting beneath windows should not cause undue obstruction when mature.

Paving shall be 450x450x50mm pre-cast concrete pavers (colour and texture to TBA), laid on a dry 50mm combo mortar bed over a well consolidated 75mm granular sub-base.

Paths shall be laid to a minimum width of 900mm, with a cross-fall of 1:100 away from buildings and where necessary, run-off shall be disposed to the drainage system via a “French” drain.

The following paved areas shall be provided –

- Front paths as per Site Layout Plan
- Rear paths from back gate to back door
- Rear patio of not less than 6m²
- Rear area for storage of refuse & recycling bins (3no. wheelie bins provided by others)
 - Flats to have rear fenced Bin Store sized for two 1100L Euro Bins
- Level access from bin area to kerbside

Care should be taken to avoid the “bridging” of DPCs.

The Contractor shall ensure their final design discharges Planning Condition 15 (Refuse / Recycle Storage), prior to occupation.

28.0 Fencing

The Contractor shall ensure their final design discharges Planning Condition 16 (Boundary Treatment), prior to commencement, to which the following requirements shall apply –

- Enclosure of Open Spaces - 450mm Timber Knee-Rail, with double gate(s) for maintenance vehicles
- Enclosure of Front Gardens / Border (where not open plan) – 1000mm Black Bow-top Railings
- Side / Rear Perimeter Garden Fences – 1800mm close-boarded fence
- Side / Rear Gates - 1800mm high close-boarded, lockable, framed, ledged & braced
- Gate to Shared Rear Access of Flats shall not be lockable
- Side / Rear Perimeter Garden Fences (where surveillance is deemed preferable by SBD, e.g. overlooking parking bays) – 1500mm close-boarded fence with 300mm trellis
- Rear Garden Privacy Panel - 1800mm high close-boarded, not less than 2000mm in length
- Rear Dividing Garden Fences – 1200mm panel fence with 300mm trellis

All timber fencing shall be mounted on timber post with gravel boards to BS1722, with tantalised treatment to the following Use Classes under BS EN 335-1 –

- Fencing Boards / Panels above Ground – UC3.2
- Posts & Gravel Boards in Contact with the Ground – UC4

Trimming / cutting of treated timber should be kept to a minimum. Cut timber shall not be permitted in contact with the ground and will receiving two coats of brushed preservative before incorporation into the Works.

29.0 Roads, Footpaths & Parking Bays

These shall be constructed as per the Site Layout Drawings, to a Contractor's design yet to be approved, from a combination of either block paving, resin bound aggregate or bitumen macadam, with clear delineation between roads, footpaths and parking bays.

The Contractor shall ensure their final design discharges Planning Condition 10 – Surfacing Materials, prior to the completion of external building works.

29.1 Access Roads & Footpaths

Access roads and footpaths shall be constructed to an adoptable standard, with due consideration given to the use of the roads by delivery lorries, refuse collection and emergency vehicles.

Communal steps should be avoided, but where necessary they shall be instructed to Highway Specification, with Part M compliant handrails and hi-vis non-slip nosing.

Embossed pressed steel street name plate(s) shall be provided to the Highway Authority's specification.

29.2 Parking Bays

These shall be constructed with level access and shall be identified with house numbers on metal discs, fixed to the paving, with visitor parking identified with a disc marked "V".

30.0 Landscaping

The Contractor shall ensure their final design discharges Planning Condition 14 (Soft Landscaping), prior to the completion of external building works.

A detailed landscaping proposal shall be provided, based on the Tender Drawings and to which the following requirements shall apply –

- See 3.7 - Ecology
- Existing features should be considered for re-use
- Existing trees that are to be retained shall be suitably protected for the duration of the Works
- All trees & shrubs shall be appropriate for their location, using suitably sized robust specimens
- Trees shall be selected / positioned to avoid future mature root damage to structures / drainage and trees with staining berries or excessive leaf fall should be avoided
- Shrubs shall be low maintenance, resistant to selective weed-killer, not harmful and where excessively "prickly", shall not be accessible to the public
- Trees & shrubs should be kept a minimum of 2.5m from adopted highway, using species that will not overhang and/or obstruct vision splays
- Temporary & permanent fencing shall be erected as necessary to protect trees & shrubs

All landscaping and maintenance is to be undertaken by an appropriately specialist subcontractor.

All soil retained on site shall be fit for the use it is intended and where stockpiled, it shall be suitably protected.

All imported top soil shall be landscape quality and comply with BS3882:2015, with a test / analysis sheet for each load. Unsatisfactory soil shall be removed from site.

Minimum topsoil depths shall be as follows –

- Grass – 150mm
- Shrubs – 300mm
- Trees – 600mm

The contractor shall ensure the subsoil is not overly compacted prior to spreading.

Delivery, storage and planting of bare root trees and shrubs shall be closely monitored and restricted to spring & autumn.

The Contractor shall be responsible for the maintenance of all communal areas for a period of 12 months from Completion, including weeding, pruning, watering (as required), grass cutting and salt gritting.

31.0 Communal Street Lighting

The Contractor shall ensure their design discharges Planning Condition 18 (External Lighting), prior to the completion of external building works.

External lighting proposals shall be design in collaboration with Weston Power Distribution, the Highway Authority and their current street-lighting provider Balfour Beatty Living Places (Services Division) for approval by the LPA, SBD and the Employer.

Street lighting within areas to be adopted shall be included within the adoption.

Any non-adopted lighting shall be supplied by way of the Employer's unmetered MPAN and controlled by a "dusk till dawn" photocell.

Where the use of lighting bollards is unavoidable, these shall be Abacus AL9000 LED Bollards or similar approved.

Also see 3.7.3 Ecology (Lighting).